11.15.8

EE23BTECH11063 - Vemula Siddhartha

Question:
A transverse harmonic wave on a string is described by

$$y(x,t) = 3.0\sin\left(36t + 0.018x + \frac{\pi}{4}\right)$$

where x and y are in cm and t in s. The positive direction of x is from left to right.

1) Is this a travelling wave or a stationary wave? If it is travelling, what are the speed and direction of its propogation?
2) What are its amplitude and frequency?
3) What is the initial phase at the origin?
4) What is the least distance between two successive crests in the wave?